

CLAIMS:

1. An end cone for an exhaust emission control device, comprising:
 - an outer shell having an inner surface; and
 - an end cone insulator comprising insulation and binder defining a passage therethrough, said end cone insulator having a first surface being disposed adjacent to said inner surface and a second surface, at least a portion of said second surface being exposed to said passage.

2. The end cone of claim 1, wherein at least a portion of said first surface of said end cone insulator is connected to said inner surface of said outer shell.

3. The end cone of claim 1, wherein said end cone insulator further comprises:
 - a core having a first side and a second side, said first side for supporting a portion of said second surface, and said second side being connected to said outer shell.

4. The end cone of claim 3, wherein said end cone insulator further comprises a mesh forming said second surface.

5. The end cone of claim 1, wherein said end cone insulator further comprises a mesh forming said second surface.

6. A method of manufacturing an end cone, comprising:
 - forming an outer shell, said outer shell having an inside surface;
 - forming an end cone insulator comprising binder and insulation, said end cone insulator having an inboard end, an outboard end, a first surface, and a second surface; and

disposing said end cone insulator in said outer shell such that said inside surface and said first surface are adjacent, and such that at least a portion of said second surface is exposed.

7. The method of claim 6, further comprising:
connecting a first end of a core to said outer shell, and connecting a second end of said core to said end cone insulator.

8. The method of claim 7, further comprising forming said second surface of a mesh.

9. The method of claim 6, further comprising forming said second surface of a mesh.

10. An exhaust emission control device, comprising:
a substrate;
a housing having an inlet end and an outlet end;
a retention material supporting said substrate in said housing
between said inlet end and said outlet end;
a pair of outer shells, one of said outer shells being disposed on said inlet end, and a second one of said outer shells being disposed on said outlet end;
and

a pair of insulators comprised of insulation and binder, said insulators having a first surface disposed adjacent to an inner surface of said outer shell, each of said insulators being connected at least at an outboard end to said outer shells, and each of said insulators being supported at an inboard end by said substrate and said retention material.

11. The exhaust emission control device of claim 10, wherein said substrate is selected from the group consisting of a catalytic converting

substrate, a catalytic absorbing substrate, a diesel particulate trapping substrate, and a non-thermal plasma converting substrate.

12. The exhaust emission control device of claim 10, wherein said insulators each further comprise a core, said core connecting said outbound end to said outer shells.

13. The exhaust emission control device of claim 12, wherein at least said insulator at said inlet end further comprises a mesh forming a second surface of said insulator.

14. The exhaust emission control device of claim 10, wherein at least said insulator at said inlet end further comprises a mesh forming a second surface of said insulator.

15. A method of manufacturing an exhaust emission control device, comprising:

forming insulators from binder and insulation, said insulators having an inboard end, an outbound end, a first surface, and a second surface opposite said first surface;

supporting a substrate in a housing with a retention material, said housing having an inlet end and an outlet end;

placing a first one of said insulators at said inlet end such that its inboard end is supported by said substrate and said retention material; and

placing a second one of said insulators at said outlet end such that its inboard end is supported by said substrate and said retention material.

16. The method of claim 15, further comprising:
connecting a first outer shell to said inlet end over said first one of said insulators; and

connecting a second outer shell to said outlet end over said second one of said insulators.

17. The method of claim 15, wherein said housing includes an integral outer shell at said inlet end and said outlet end.

18. The method of claim 17, further comprising:

connecting said integral outer shell at said inlet end over said first one of said insulators; and

connecting said integral outer shell at said outlet end over said second one of said insulators.

19. The method of claim 15, further comprising connecting a core to said outboard end of said insulators.

20. The method of claim 15, further comprising further comprising forming said second surface of a mesh.